Mathematics as a source of knowledge

Science, Mathematics

In Wikipedia (2007), Mathematicsis defined as " the body of knowledge centered on concepts such as quantity, structure, space, and change, and also theacademicdiscipline that studies them." In general, mathematicians seek out patterns whether found in numbers, space, science, computers, abstracts, etc. Often comparing mathematics tomusicandpoetry, it is an interesting fact that many mathematicians find aesthetic beauty in studying math, even describing it as an " art form." Quoting the famous philosopher and mathematician Bertrand Russell, " mathematics possesses not only truth, but supreme beauty…."

Mathematics is all around the world we live in. The day we came into this world, we were born into a world of numbers -- from our birthday to our APGAR scores, the exact time we were born to the number of our toes. Growing up, we were introduced to math when we started counting the ten little Indians with our fingers, eventually leading us to its more complex nature by solving logarithms with the command of our scientific calculators. Studying math and living with it day in and out oftentimes makes this subject taken for granted. But come to think of it, math makes one think in a way no other field can stimulate one's intellect.

Because of math, we have acquired, if not mastered, the application of logical thinking in all things practical. Mathematics in our century has a very minute, if at all, margin for error. What's ten is ten, and an apple plus an apple equals two apples. It's this or that, no grey areas in between. Although contrary to the opinion that math is not a closed intellectual system, in which everything has already been worked out, the mere existence of math

compels us to have a black and white perspective of the world. The notion of grey areas is an area that to this day the learned are constantly exploring.

Looking at history, the British mathematician Charles Babbage who originated the idea of a programmable computer was said to have spent hisfamilyfortune in search of the answer to mechanize computation. He was quoted as " obsessed" with the pursuit of eliminating the inaccuracy of human calculation. The discontent that he had with the probability of human error to a large extent shows that great thinkers predominately believe that the exact explanation of things we want to understand in this world is within math's reach. Great intellects like Babbage and other legendary mathematicians of our time prove that there is a possibility of defining all empirical things in mathematical terms.

Even symbols used in math can be described as a language unique in itself. Mathematical notation in the modern world consists of strict syntax and encoded information that will otherwise be difficult to write in another way. These are only few of many examples illustrating the black and white perspective that math gives us. As with science, math makes you think logically, seeking out precise explanations for possibly everything calculable. What makes it remarkably unique though is that the rationale behind the accuracy of findings in math is not as easy to disprove as those in other fields.

The myriad of disciplines that have stemmed from mathematics such as applied mathematics, statistics, and mathematical economics, among others, serve as the different venues for utilizing math as a means of solving real-world problems. ButI believethat I need not be a brilliant mathematician

to know that one-half of four is two, nor would I need software to count the exact number of days left before Christmas. Needless to say, the basic use of mathematics is an integral part of our life. It enables us to calculate not only the definite answers to complicated mathematical problems, but it also teaches us that in every problem, there is a right and wrong answer.

There are no maybes. Unlike essays, there are no half-point systems in your math test answers, it's either your answer is correct or it is wrong. That's why in approaching things in real life, we do not content ourselves dealing with half-baked questions and half-hearted answers, nor are we satisfied with " what-could-have-beens." In our efforts to strike a balance in our existence, we hardly accommodate room for unanswered questions. Just as a toddler naturally asks us with the never ending why, so is our infinite obsession for seeking the right answers to our questions inherent in our nature as humans. After all, despite the cliché that it is, we don't want to leave room for grey areas.

REFERENCE:

Wikipedia. http://en. wikipedia. org/wiki/Mathematics (25 Feb. 2007).